

## Tennessee Pollution Prevention Partnership Success Story



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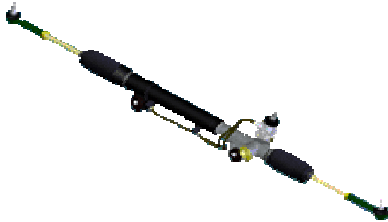


1-800-734-3619  
[www.tdec.net/dca/tp3](http://www.tdec.net/dca/tp3)

## Plastic Recycling Gleans Facility Extra Dollars

### The Member

Tennessee Koyo Steering Systems Co. has been in operation at their Monroe County Vonore, TN site since 1989. The facility of 345,000 sq ft, employees 800 associates and is located on property adjoining Lake Tellico. Currently the facility produces over 8,000 rack and pinion steering systems per day for domestic and international original equipment auto manufacturers. Tennessee Koyo is ISO 14000 certified and has a very positive attitude toward environmental management and protecting the environment. Tennessee Koyo is committed to complying with environmental laws, regulations, and other requirements and to continually improving their environmental performance.



### The Story

Rack and pinion steering systems are a safety related item requiring close tolerance manufacturing and extreme care of the parts throughout the process. Plastic is utilized extensively to protect the parts from exposure to the elements thus reducing surface oxidation and from contact with each other during transit, which could cause surface defects. Either of these two conditions, rust or nicks, would adversely affect performance of the final product. Originally the process required plastic separators and wrapping be replaced in the returnable bins after the parts were removed. Later, at a wash station for the bins, the plastic

was removed and collected for solid waste disposal (double handling) and the bins cleaned for reuse. One of the kaizen continuous improvement teams identified an opportunity to reduce the multiple handling, eliminate the solid waste generation, and instead generate positive cash flow by recycling. Almost immediately the idea was implemented and instituted throughout the operation. Having the two grades of plastic, wrapping and layer separators, the team chose to separate into the two grades at each workstation. Plastic bags were provided for the wrapping grade and stands were designed, built, and incorporated for the layer separators. Internal communication regarding the change was provided and almost immediately all employees were participating in order to achieve 100% recycling of the plastic.

### The Success

Tennessee Koyo recognized the potential positive impact of this project and desired the total commitment of all employees in making plastic recycling a complete success. Internal communication through the kaizen structure was utilized to communicate the concept and the teams have reported that this project is one of the most widely adopted and effective projects ever completed at the facility.

### The Pollution Prevented

Ninety days after implementation, zero recyclable plastic is going into solid waste (5 tons per month eliminated) and the facility is generating about \$170.00 positive dollars per month from their sale of the plastic to the local recycling company (\$60) plus the landfill cost avoidance (\$110).

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